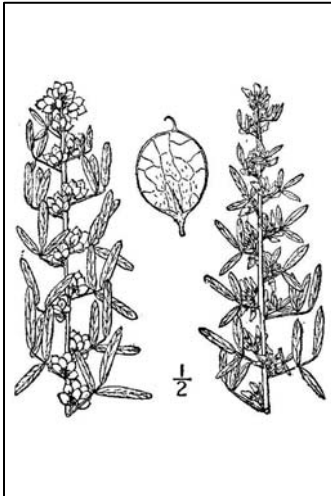


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Plants You Should Know: Partridge Pea and other native legumes

Aaron P. Jeffries, Upland Wildlife Coordinator, Jefferson City, MO

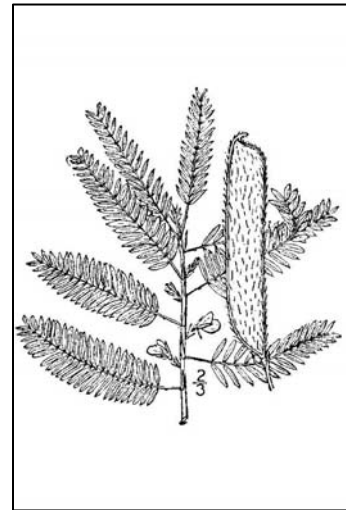
Partridge Pea (*Chamaecrista* spp.) is a native legume found throughout Missouri in native grasslands, old fields and open woodlands. Partridge pea has bright yellow, pea-shaped flowers that bloom in July and August. The seedpods turn a dark brown when mature and often spilt open, scattering the seed on the ground. Partridge pea is an annual legume and is common in areas where the perennial vegetation has been set back the previous year by a disturbance such as burning, disking, grazing or spraying.



Slender Lespedeza (*Lespedeza virginica*)
USDA-NRCS PLANTS Database / **Britton, N.L., and A. Brown. 1913. Illustrated flora of the northern states and Canada. Vol. 2: 406.**

Other native perennial legumes can be found in about every type of grassland and woodland habitat in Missouri. Common native legumes include **Illinois bundle flower** (*Desmanthus illinoensis*), **white and purple prairie clover** (*Dalea* spp.), **roundhead bushclover** (*Lespedeza capitata*), **slender lespedeza** (*Lespedeza virginica*), **beggarslice** (*Desmodium* spp.). These species are commonly found in native wildflower seed mixes. Perennial native legumes are most productive in areas regularly disturbed with a management activity such as prescribed burning. All native legumes are a good food source for quail and other wildlife. More importantly, the plants attract a variety of insects, which in turn are a nutritious food source for hungry quail chicks.

Consider overseeding some of your fields with native legumes to improve plant diversity. Overseed $\frac{1}{4}$ to 3 PLS pounds of seed per acre after completing a summer or fall/winter disturbance (management practice). Wildflower seeds should be overseeded in the winter to guarantee proper stratification (a process of breaking the seed's dormancy). The seed can simply be broadcasted into these areas in the winter by hand or with a broadcast spreader.



Partridge Pea (*Chamaecrista* spp.)
USDA-NRCS PLANTS Database / **Britton, N.L., and A. Brown. 1913. Illustrated flora of the northern states and Canada. Vol. 2: 337.**

Seeding a wildflower mixture made up of several native species is favored over seeding a single species. A good wildflower mixture will contain a minimum of 5 to 10 species and consist of native perennial species, with annuals comprising no more than 15% of the mix. Native species are highly preferred over aggressive introduced or naturalized species. Always ask for seed by the PLS (Pure Live Seed) pound, not by the bulk pound.

Did You Know???

Kids will get the first chance at quail and pheasant in Missouri this fall. A new youth-only quail and pheasant season will occur October 27th and 28th, 2007. The season is open to youth age 6 through 15. Youths who are not hunter-ed certified must hunt in the immediate presence of a properly licensed adult, however, the adult may not hunt during this special 2-day event. Kids with hunter-ed training can take to the fields on their own. For full details on the season, check the Conservation Department website www.missouriconservation.org or contact your nearest regional office.

Visit www.missouriexchange.com to buy or sell Missouri-grown products – a great site to find native grass, wildflowers, trees and shrubs.

Build it and they will come...

CRP landowner "Bare Ground Management"

An Andrew County Landowner who purchased a farm with CRP acreages of warm-season and cool-season grasses reported great response to a late winter prescribed burn. The landowner burned 1/3rd of his warm-season grass CRP in early March 2007 and started working up areas for the spring food plots. The next day, the landowner went out to visit the farm and a covey of quail was using the burned area. The second trip out a pair of pheasants was foraging in the burned area. On the third visit a covey of quail was in the bare ground of a new food plot, next to the burned area. It appears the birds responded immediately to the disturbed ground. **Jeff Powelson, Private Land Conservationist, Buchanan/Andrew Counties**

In 1988 we purchased 220 acres in Warren County. We immediately started to remove as much fescue on a western portion of the property through plowing and some spraying with Roundup. In these same areas, we planted food plots and built 18' x 18' brush piles using old railroad ties stacked as a base. We also planted a few plots with ladino clover and planted edge strips of orchard grass, timothy, red top and a legume mix.

Previously, most of these open grass fields and scrub brush had been grazed by cattle. This grazing left areas of diversity and brush remained stable. The fescue had been kept low enough for small game usage. We were fortunate, at the time, to have three larger coveys (18-24 birds) and a small covey (8-10 birds) along with many rabbits. After several years of non-grazing, the diversity changed, causing a drastic reduction in the quail population. The rabbit population didn't seem to suffer as badly, since they were not as dependent upon roosting/loafing areas and the special escape cover required by quail.

A few years ago we started working more closely with the Missouri Department of Conservation and Dan Crigler with the Private Land Division. Dan outlined a plan that would help us maintain our deer and turkey population, but also greatly improve our quail and rabbit population. We started cutting trees and treating the stumps in the winter for edge feathering. We sprayed the brome and fescue in these areas and planted alfalfa edge strips. We constructed brush piles in these areas from some of the trees, while others we left lay where they fell. We also planted strips of wheat next to the alfalfa for future quail brooding areas, all according to the plan give to us by Dan Crigler.

Last fall we sprayed, burned, and disked the fescue and brome in a 15 acre field on the east section of the property. This year we sprayed this same area again to set back any seedlings and burned the residue. The burning that we did jump started the existing wildflowers, blackberry, and wild plum. The shrubby areas will expand naturally and be future quail covey headquarters.

This spring we rented a WSG drill from the Warren County Soil & Water District. We planted native warm-season grass and wildflowers in a 5 acre area of the field that was sprayed and burned last fall. In the remaining areas we planted alfalfa strips, wheat strips, and food plots.

This spring, for the first time in 10 years, we flushed a quail hen and heard Bobwhite calls on the west section of the farm. This western section of the farm is the area where we initially started the Private Land Owner Plan outlined by Dan Crigler. Recently we were encouraged when we saw a pair of quail run across the road. Even though we no longer have our beagles or brittany's, I am very encouraged that in the near future, with the help of the Private Land Division, we will again have the quail present as we did when we originally purchased the property. My goal is that my wife and I, along with our children and grandchildren, will once again be able to enjoy the morning calls of the Bobwhite that have been missing these last ten years.

We plan not only to continue with the initial program, but to expand to all aspects of the property. We have rabbits, deer, turkey, and now some quail, but we know that it will always be a work in progress. I believe it is a small price to pay to ensure that my family will be able to enjoy and respect some of the more simple and beautiful gifts in life. Thanks to Dan Crigler and the Private Land Division for their help to achieve this goal.

Dave Schneider, Warren County

Did You Know???

Seventy quail escape locations were noted during research conducted on quail at a central Missouri Conservation Area last winter. These 70 covey headquarter locations averaged 1,176 sq. feet in size and were an average of 6.6 feet tall. Fifty-four percent of the escape locations were in downed tree structures or edge feathered sites. Thirty-five percent of the escape locations were in existing shrubs thickets.

Fall Covey Headquarters Calendar

September

Prepare firelines for fall and winter burns
Burn native warm-season grass this month to increase plant diversity
Light disk your CRP acres now through Dec. 31
Broadcast alfalfa and wheat into tilled firebreaks

October

Conduct fall covey whistling counts 20-30 minutes before sunrise
Prepare for edge feathering by spraying brome/fescue where trees will drop
Spray fescue/brome in fencelines, along woody draws, and under shrubs after a killing frost (to avoid killing desirable plants)
Spray native grass plantings for invading brome and fescue after a killing frost
Spray CRP cool-season grasses now through Dec. 1

November

Basal spray undesirable trees according to herbicide label now through March
Order your covey headquarter shrubs from the MDC nursery through May - blackberry, grey/roughleaf dogwood, and wild plum, are best for quail

Did You Know???

The Natural Resources Conservation Service (NRCS) has updated their wildlife jobsheets. These are 1-3 page tip sheets on various wildlife practices. These are located on the Missouri NRCS website – <http://www.mo.nrcs.usda.gov/technical/forms/wildlife.html> The sheets contain detailed habitat management instructions and many have pictures of the habitat you are trying to create. Check out <http://extension.missouri.edu/explore/miscpubs/mp0902.htm> for a copy of the updated Quail Habitat Appraisal form. Use it to evaluate your farm for quail habitat.

Pass this issue along...

We are trying to increase our mailing list. Please pass this information on to your friends that may be interested in receiving this free newsletter. Fill out the following and send to:

Covey Headquarter Subscription
USDA Service Center
3915 Oakland Ave. Suite 103
St. Joseph, MO 64506-4920

YES – Add me to your mailing list to receive the Covey Headquarters Newsletter

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

What topics would you like to see covered in the newsletter?

Make your farm quail friendly year-round!

Do you always have bobwhites on your farm in the spring and summer, but they tend to leave in fall winter? We hear this complaint from many landowners. Chances are you have good nesting and brooding cover, but lack shrubby and woody escape cover. In early fall as grass cover breaks down, coveys will begin selecting winter ranges. During this period, the birds are searching for good woody escape cover to help make it through the winter. If your farm is short on escape cover, the birds you produced in the summer may leave your farm. It's not too late to keep those birds on your farm, or even attract birds from your neighbors. Increase your woody escape cover by edge feathering. Edge feathering will provide good escape cover at ground level for your birds. Be sure to spray any grasses in the area before you drop your trees. Check out the edge feathering jobsheet on the website listed on page 4.

Want to find more quail on public land?

Special quail hunts set for Cover Prairie C.A. and Davidson-Paris W. A.

Hunting quail on public land can be frustrating. Quail that do not succumb to the gun became very difficult to hunt—they hide in heavy woody cover, neighboring private land, and they run and flush wild. To improve your chance of finding quail, the Missouri Department of Conservation restricts hunting pressure on select Conservation Areas. On two areas in Howell County, public use is limited to a handful of days, and only one hunting party each of those days. MDC is accepting applications for special quail hunts on the Dan and Maureen Cover Prairie Conservation Area and the Carrick W. Davidson- Robert G. Paris Wildlife Area, both near West Plains.

Permits for the hunts will be issued by lottery. Applicants may apply for only one of the areas. Successful applicants will be given a one day permit to hunt on the area selected, during the assigned time period. There will be 18 hunts on Cover Prairie C.A. and 8 hunts on Davidson-Paris W.A. Each successful applicant will be allowed to take three other hunters, and they will have the area to themselves. Each party will be allowed to take four quail.

To apply for these special hunts, contact: Missouri Department of Conservation, Special Quail Hunts, 551 Joe Jones Blvd., West Plains, MO 65775 or call 417-256-7161. All applicants must include the area on which they wish to hunt, the applicants name, permanent mailing address, phone number and the names of no more than three additional people who will be in the hunting party. No person's name may be listed on more than two permits. Applications will be accepted from Sept. 1 thru Sept. 30. Successful applicants will be notified by mail by Oct. 15.

Conduct Covey Counts in October

A great way to get an idea of how many coveys your farm has is to perform a quail covey count in October. Fall covey whistling lasts only a few minutes before day-break, and gives an estimate of production and pre-hunting season conditions. Generally you will not hear the familiar "bobwhite" during the fall calling period. The covey call is a clear loud whistle vocalized as "koi-lee." Listen carefully because the call typically lasts only 30 seconds.



Choose listening stations by studying maps and aerial photos. The maximum distance a quail whistle can be heard is 800 yards, but on average, 547 yards is the limit, so space listening stations 1,000 yards apart. This will reduce the possibility of counting the same cove more than once. With a 547-yard listening radius, you are theoretically hearing quail in a 194-acre circle around you. If trees or topography limit your ability to hear quail whistling 547 yards away, listening stations can be closer together. Put listening stations on ridgetops to maximize the area you survey each morning.

Permanently mark your listening stations so they can be used every year. Listen only on clear and calm mornings starting at 45 minutes prior to sunrise during the last 3 weeks of October. Listen until about 10 minutes before sunrise. For best results, be consistent in the way you collect data. Remember to keep track of all data and keep it on file for year-to-year comparison.

Diversifying Native Grass Stands Using Fall Burning

A landowner in Gentry Co. has a 3-year-old CRP field consisting of mostly little bluestem and a few native forbs. The field provides good winter cover and nesting habitat, but lacks the plant diversity required for high quality brood rearing habitat. Basically, the field has matured into a monoculture of little bluestem and needs to be set back to an earlier successional stage. The landowner decided to try fall burning on part of the field to see if he could diversify the field without using chemicals or light discing. The following photographs were taken on June 20, 2007, which is during the prime upland bird brooding period.



Photo 1. This part of the field was burned in September of 2006, before the little bluestem had gone dormant. A warm period in October allowed some re-growth of the little bluestem before a killing frost occurred. This spring a high density of forbs, including black-eyed susan, daisy fleabane, purple prairie clover, common milkweed, dogbane, desmodium, partridge pea and Illinois bundleflower, appeared in the formerly grass-dominated field providing excellent brood rearing habitat. Extensive bare ground is present with a forb-dominated overstory. Clumps of little bluestem still occur in the understory, but have been reduced in size and number.



Photo 2. This part of the field was burned in January of 2007, when little bluestem was dormant. Notice the lack of forbs, with little bluestem still dominating the stand. Although bare ground is present between grass clumps, forbs are sparse and brood rearing habitat is not prime.

Native grass CRP can be burned from July 15-March 15. After observing the results of this fall burn and other similar burns, we highly recommend doing early fall burns on **part** of your native grass fields to diversify them and develop high quality brood rearing habitat.

Integrating Bobwhite Quail Management with Agriculture Field Day

8:00 AM to Noon on August 25, 2007
MU Bradford Research and Extension Center
Columbia, Missouri

Featured Tour Stops Include:



- Trailing Soybean and Native Wildflower Food Plots
- Native Shrub Plantings
- Basic Quail Habitat Needs
- Annual Crop Food Plots
- Invasive Species Eradication
- Native Grass Management Options
- Buffers and Edge Feathering in Agriculture Landscapes
- Alternative Planting Mixes for Erosion Control
- Next Door Neighbor's Quail Management Efforts
- Grassland Bird and Quail Habitat Needs

Free and Open to the Public-No Reservations Required

Directions: From the junction of U. S. 63 and Hwy AC on the south edge of Columbia, go 5 miles east, at the T go right just over a mile to the Bradford Farm entrance on your right.
Or check out our Web Site:
www.aes.missouri.edu/Bradford

For More Information Contact:

Tim Reinbott: 573-884-7945

Bob Pierce: 573-882-4337

Sponsored by:

University of Missouri
Missouri Department of Conservation
Missouri Soybean Association



QUAIL HABITAT FARM TOUR – LINCOLN COUNTY

SEPTEMBER 8, 2007

9AM-11AM

CONTACT JEFF ESELY – 636-528-4877 EXT. 3 FOR DETAILS

Did You Know???

The Missouri Department of Conservation has staff available to help you plan and develop quail habitat on your farm. Contact the local MDC office or USDA Service Center in your area. Listed below are the locations and numbers of MDC's regional offices.

St. Joseph – 816-271-3100
Kansas City – 816-655-6250
St. Louis – 636-441-4554
West Plains – 417-256-7161

Kirksville – 660-785-2420
Columbia – 573-884-6861
Springfield – 417-895-6880
Cape Girardeau – 573-290-5730



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